Commercial Adoption of Energy Technologies

Goal Leader(s):

Conner Prochaska, Chief Commercialization Officer, U.S. Department of Energy
Marcos Gonzales Harsha, Principal Deputy Director, Office of Technology Transitions

Overview

Goal Statement

> Enable increased commercial adoption and use of the broad suite of technologies and facilities developed and maintained by the Department of Energy through enhanced public-private and public-public partnerships. By September 30, 2021, expand engagement efforts to private and other federal entities and create tailored opportunities and products to simplify access to DOE's portfolio of facilities, technologies, and world-leading experts.

Challenge

- o   The U.S. is competing with well-resourced nations for global leadership in the transformational technologies of today and tomorrow. To compete on a playing field that is not always level, the Nation's federal R&D backbone must be in close alignment with not only federal missions; it must also be accessible to private sector innovators and their market-driven ingenuity.

Opportunity

- o   The DOE invests billions of dollars per year in research and development facilities and activities, much of it supporting our National Laboratory enterprise. This funding powers an innovation engine that produces top-tier publications and patents each year, and seeds hundreds of partnerships among DOE, the National Labs, Industry and other Federal partners. We seek to expand awareness of and access to this portfolio of innovation.

Leadership & Implementation Team

Oversight

OTT - Management Lead: Conner Prochaska, OTT

Success Stories

Senior Lead:
- Marcos Gonzales Harsha, OTT

Data & Analysis:
- Charles Russomanno, OTT

Platform Development:
- Robert Bectel, OTT

Content Input:
- National Labs and Production Facilities

Engagement

Senior Lead:
- Marcos Gonzales Harsha, OTT

Coordination Lead:
- Marlin Martes, OTT

Implementation Leads:
- Each industry engagement event to be hosted by a National Laboratory

Content Development

Senior Lead:
- Elise Atkins, OTT

Content Support:
- Peebles Squire, OTT
- Bridget Dunn, OTT

Goal Structure & Strategies

Two Principal Strategies:

- **Telling our Story Better**: The Department's R&D portfolio has been responsible for countless breakthroughs in science and technology, many with transformational real-world impact. However, too often the DOE's role in supporting the discovery science and applied research that enabled these recognizable outcomes is unknown in the public realm. OTT works to counteract this by publishing technology spotlights, success stories, and case studies for broader public awareness. These are made available at through the Department's Lab Partnering Service web platform.
  - In addition, OTT works to design and develop packages of valuable content and information from across the agency and the Labs that may be of interest to specific communities. For example, a subset of DOE's programs/content/workforce initiatives may be of interest to the University community, and OTT is developing a package of University-relevant DOE content.

- **Creating Connections**: By leveraging the Department's convening power, OTT works to enhance the R&D portfolio by creating tailored technology engagement opportunities that bring together the National Laboratories with Industry innovators. The goal of these events is to seed new connections and partnerships that will generate future public-private hand-offs. Most such events are branded through the Innovation*X*Lab Series. *X*lab events are coordinated through OTT and hosted by the National Labs; each one showcases a different strategic technology or sector with upcoming events planned around Biomanufacturing, Carbon Utilization and Quantum Information.

Summary of Progress – FY 20 Q1

Tool Development

OTT has developed an internal process for tracking and categorizing new connections. Plans for a new Customer Relationship Management tool are proceeding. Deployment of a new system is under review by the Office of the Chief Information Officer.

Success Stories

OTT successfully developed a template and established a web presence for collection and presentation of DOE Success Stories. New content will be added to this public database starting in Q2 FY 2020.

Industry Engagement

OTT successfully convened an Innovation*X*Lab Summit on Artificial Intelligence in October, hosted by Argonne National Lab. The event was attended by about 300 high-level federal, Lab and industry representatives and yielded over 400 new connections.

Summary of Progress – FY 20 Q2

Tool Development

OTT continues to develop a new Customer Relationship Management tool. OTT funded an analysis in Q2 FY 2020 to identify and evaluate alternative options which are currently under review by OTT and the Office of the Chief Information Officer.

Success Stories

New content was added to the public Success Stories database in Q2 FY 2020 related to Artificial Intelligence, Energy Storage, Cybersecurity, Additive Manufacturing and DOE National Laboratory and Facility Success Stories.

Industry Engagement

OTT successfully convened an Innovation*X*Lab Summit on Bio-Manufacturing in Q2 FY 2020, hosted by Lawrence Berkeley National Laboratory. The event was attended by about 300 high-level federal, Lab and industry representatives and yielded over 400 new connections.

Summary of Progress – FY 20 Q3

Tool Development

OTT has deployed a fully operational Customer Relationship Management (CRM) database utilizing DOE SharePoint. The CRM has over 650 contacts listed and can be broken down by 15 different categories. OTT is now able to track calls / meetings / interactions with contacts listed in the CRM database.

Success Stories

New and legacy content continues to be added to the public Success Stories database in Q3 FY 2020 related to Artificial Intelligence, Energy Storage, Cybersecurity, Additive Manufacturing and DOE National Laboratory and Facility Success Stories.

Industry Engagement

Working with industry stakeholders, OTT successfully participated in 20 virtual events/webinars in Q3 FY 2020. The events were attended by about 2,000 federal, Lab and industry representatives and produced multiple new connections.

Summary of Progress – FY 20 Q4

Tool Development

The CRM tool deployed by OTT in Q3 now has over 800 contacts listed and can be broken down by 15 different categories. OTT continues to be able to track calls / meetings / interactions with contacts listed in the CRM database.

Success Stories

OTT added 32 new success stories to the public Success Stories database in Q4, as well as adding 54 legacy success stories to complete the first tranche of published legacy uploads.

Industry Engagement

Working with industry stakeholders, OTT participated in numerous virtual events/webinars. OTT hosted 12 webinars in its Funding Opportunities Series, four in its STEM toolkit series, and three Quantum webinars on Life Sciences, Finance, and Communications, Transportation and Navigation. The OTT events were attended by over 500 federal, Lab and industry representatives and produced multiple new connections.

Key Milestones: CRM Tool and Internal Tracking Process

Milestone Summary					
Key Milestone	**Milestone Due Date**	**Milestone Status**	**Change from last quarter**	**Owner**	**Comments**
Development an internal Customer Relationship Management (CRM) tool and process that allows for strategic cataloging of external connections and captures outcomes of office engagements.	Q1, FY 20	Met		OTT, CIO	• Developed an internal process for tracking and tagging new connections.
Deployment of an internal Customer Relationship Management (CRM) tool and process that allows for strategic cataloging of external connections and captures outcomes of office engagements.	Q2, FY 20	Met in Q3		OTT, CIO	• OTT has deployed a fully operational CRM database utilizing DOE SharePoint. • OTT funded an analysis in Q2 FY 2020 to identify and evaluate alternative options, which were reviewed by OTT and the CIO. • OTT's CRM has over 650 contacts listed, additionally can be broken down by 15 different categories. • OTT has the capability to pull lists directly to excel based on categories and it can be accessed at any time. • OTT is able to track calls / meetings / interactions with those contacts listed in the CRM database.

Key Milestones: Engagement

|	Milestone Summary				
Key Milestone	**Milestone Due Date**	**Milestone Status**	**Change from last quarter**	**Owner**	**Comments** *[Provide discussion of Progress, changes from last update, Anticipated Barriers or other Issues Related to Milestone Completion]*
Coordinate, host, or sponsor 1 Industry engagement event or forum and track outcomes	Q1, FY 20	Met		OTT	• Held 1 Innovation*X*Lab event on Artificial Intelligence in coordination with Argonne National Lab. • Sponsored DOE presence at a major Commercial Space industry event and coordinated the involvement of 6 Labs.
Coordinate, host, or sponsor 1 Industry engagement event or forum and track outcomes	Q2, FY 20	Met		OTT	• Held 1 Innovation*X*Lab event on Bio-Manufacturing in coordination with Lawrence Berkeley National Lab
Coordinate, host, or sponsor 1 Industry engagement event or forum and track outcomes	Q3, FY 20	Met		OTT	• Participated in 20 virtual events/webinars, to include an InnovationXLab virtual event on Carbon Capture Utilization Sequestration
Coordinate, host, or sponsor 1 Industry engagement event or forum and track outcomes	Q4, FY 20	Met		OTT	• OTT hosted 12 webinars in its Funding Opportunities Series, four in its STEM toolkit series, and three Quantum webinars on Life Sciences, Finance, and Communications, Transportation and Navigation
Coordinate, host, or sponsor 1 Industry engagement event or forum and track outcomes	Q1, FY 21			OTT	
Coordinate, host, or sponsor 1 Industry engagement event or forum and track outcomes	Q2, FY 21			OTT	
Coordinate, host, or sponsor 1 Industry engagement event or forum and track outcomes	Q3, FY 21			OTT	
Coordinate, host, or sponsor 1 Industry	Q4, FY 21			OTT	

Key Milestones: Success Stories

	Milestone Summary				
Key Milestone	**Milestone Due Date**	**Milestone Status**	**Change from last quarter**	**Owner**	**Comments** *[Provide discussion of Progress, changes from last update, Anticipated Barriers or other Issues Related to Milestone Completion]*
Develop a template and establish a web presence for collection and presentation of DOE Success Stories.	Q1, FY20	Met		OTT	• Completed template and web presence. New content will be added starting in Q2 FY 2020.
Publish at least 5 new keyword-searchable success stories online.	Q2, FY20	Met		OTT	• 12 New success stories were published to OTT's web presence in field of AI, Energy Storage, Cybersecurity, Additive Manufacturing and DOE National Laboratory and Facility success.
Publish at least 5 new keyword-searchable success stories online.	Q3, FY20	Met		OTT	• 41 New success stories were published to OTT's web presence in fields of AI, Energy Storage, Cybersecurity, Additive Manufacturing and DOE National Laboratory and Facility success. • 105 legacy success stories were published.
Complete transfer of existing dataset of success stories to the public platform. Publish at least 5 new keyword-searchable success stories online.	Q4, FY20	Met		OTT	• 32 New success stories were published to OTT's web presence in fields of Carbon Utilization, AI, Energy Storage, Additive Manufacturing, Quantum Technology and DOE National Laboratory and Facility success. • 54 legacy success stories were published. • Transfer of existing (legacy) data set of published success stories complete. OTT may continue to update and publish other legacy material but will focus on developing new content.
Publish at least 5 new keyword-searchable success stories online.	Q1, FY21			OTT	
Publish at least 5 new keyword-searchable	Q2, FY21			OTT	

Key Milestones: Content Packages

Milestone Summary					
Key Milestone	**Milestone Due Date**	**Milestone Status**	**Change from last quarter**	**Owner**	**Comments** *[Provide discussion of Progress, changes from last update, Anticipated Barriers or other Issues Related to Milestone Completion]*
Create a tailored DOE content package for a specific, external stakeholder community	Q3, FY 20	Met		OTT	• OTT has created the University Toolkit that features consolidated DOE content and information of interest to the University community, including students, educators, and administrators.
Create a second tailored DOE content package for a specific, external stakeholder community	Q3, FY 21	Met in Q3 2020.		OTT	• Case Study: Contributions of the U.S. Department of Energy National Laboratories and Facilities to Advance Industry: Medical Imaging, Diagnostics, and Treatment. Accelerated release due to its relevance in highlighting DOE's role in the health care field amidst the COVID pandemic.

Key Indicators: Success Stories

Planned and Actual NEW Success Story Development
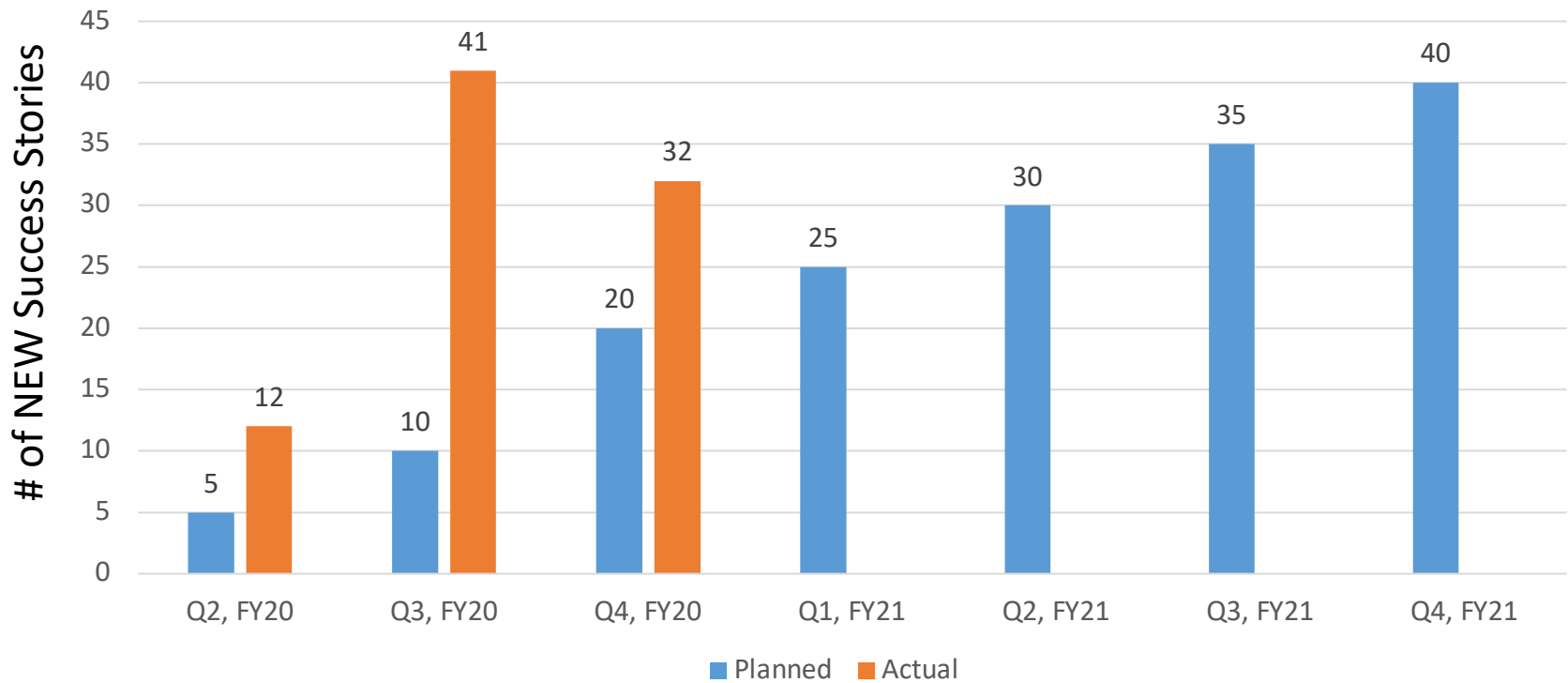
Data Accuracy and Reliability

OTT directly oversees collection of success stories and manages the call for Lab input on new connections made at Lab-Industry events. The Labs ensure the quality and accuracy of the information submitted in line with clearly-articulated protocols and definitions.

Additional Information

Contributing Programs

Organizations:

- o Technology Transitions Engagement Milestone: Coordinate, host, or sponsor Industry engagement events or forums and track outcomes:
    - **DOE National Laboratories**
    - Artificial Intelligence
    - Advanced Research Projects Agency - Energy
    - Cybersecurity, Energy Security, and Emergency Response
    - Energy Efficiency and Renewable Energy
    - Electricity
    - Fossil Energy
    - Nuclear Energy
    - National Nuclear Security Administration
    - Science
    - Support Organizations: Chief Financial Officer, General Counsel, Management

Program Activities:

- o Technology Transitions co-chairs the Office of Science and Technology Policy/National Science and Technology Council (NSTC)/Lab-to-Market (L2M) subcommittee
- o Technology Transitions obtains input from and coordinates with other federal departments and agencies on their commercialization and technology transfer activities through L2M and other inter-agency activities
- o Technology Transitions Programs/Activities: Technology Commercialization Fund, Energy I-Corps, Lab Partnering Service, Practices to Accelerate the Commercialization of Technologies, Innovation XLab Summits, Data Collection and Reporting, Policy Coordination, Partnership Development, Market Analysis, and Communicating Commercialization Successes

President's Management Agenda

- o Improve Transfer of Federally –Funded Technologies from Lab-to-Market: Reducing the administrative burden and regulatory burdens for technology transfer and increasing private sector investment.

Regulations: NONE

Tax Expenditures: NONE

Policies: NONE

Other Federal Activities:

- o National Institute of Standards and Technology Return on Investment Initiative

Stakeholder / Congressional Consultations

Technology Transitions works with Congress, the National Laboratories, researchers, DOE programs, other federal agencies, and the private sector to build upon existing policies and procedures, best practices, initiatives and tools to improve technology transfer outcomes.